CLAIMS

We claim:

1. A computer-implemented method for stylizing data comprising:

obtaining a domain object comprising an object representation of data stored in a database for a domain entity;

obtaining an application object comprising an object representation of the data in the domain object that is relevant for a particular computer application; and

obtaining a presentation object comprising an object representation that encapsulates a visual appearance of the data in the application object.

2. The method of claim 1 wherein the domain object contains all information about the domain entity that the domain object represents.

3. The method of claim 1 further comprising a stylization agent object obtaining the application object for the domain object based on a stylization context, wherein the stylization context identifies only that data relevant for the particular computer application.

4. The method of claim 1 wherein the application object further comprises business logic that provides functionality for the particular application.

5. The method of claim 1 further comprising a stylization agent object obtaining the presentation object for the application object based on a stylization

context, wherein the stylization context identifies a visual appearance for the data in the application object.

6. The method of claim 1 further comprising obtaining a stylizer object, wherein the stylizer object comprises:

a data object selected from a group comprising the domain object and application object;

a stylization context object, wherein the stylization context object comprises a stylization context;

a stylization agent;

a mapping of the stylization agent to a paired index of data objects and stylization context objects; and

a stylize method that invokes an appropriate stylization agent based on the mapping.

7. The method of claim 6 wherein the paired index is a two-dimensional array of stylization agents indexed by a data object class and stylization context.

8. The method of claim 1 further comprising caching the application object.

9. The method of claim 1 further comprising caching the presentation

object.

10. The method of claim 1 wherein the domain entity is a mechanical domain entity.

11. The method of claim 1 wherein the domain entity is an architecture, engineering and construction (AEC) domain entity.

12. The method of claim 1 wherein the domain entity is a geographic information system (GIS) domain entity.

13. An apparatus for stylizing data in an object-oriented computer system comprising:

an object-oriented computer system having a memory and a data storage device coupled thereto;

a domain object stored in the memory of the computer system, the domain object comprising an object representation of data stored in a database for a domain entity;

an application object stored in the memory of the computer system, the application object comprising an object representation of the data in the domain object that is relevant for a particular computer application; and

a presentation object stored in the memory of the computer system, the presentation object comprising an object representation that encapsulates a visual

appearance of the data in the application object.

14. The apparatus of claim 13 wherein the domain object contains all information about the domain entity that the domain object represents.

15. The apparatus of claim 13 further comprising a stylization agent object configured to obtain the application object for the domain object based on a stylization context, wherein the stylization context identifies only that data relevant for the particular computer application.

16. The apparatus of claim 13 wherein the application object further comprises business logic that provides functionality for the particular application.

17. The apparatus of claim 13 further comprising a stylization agent object configured to obtain the presentation object for an application object based on a stylization context, wherein the stylization context identifies a visual appearance for the data in the application object.

18. The apparatus of claim 17 further comprising a stylizer object, wherein the stylizer object comprises:

a domain object selected from a group comprising the domain object and application object;

a stylization context object, wherein the stylization context object

comprises a stylization context;

a stylization agent;

a mapping of the stylization agent to a paired index of data objects and stylization context objects; and

a stylize method that invokes an appropriate stylization agent based on the mapping.

19. The apparatus of claim 18 wherein the paired index is a two-dimensional array of stylization agents indexed by a data object class and stylization context.

20. The apparatus of claim 13 wherein the application object is stored in a cache of the computer system.

21. The apparatus of claim 13 wherein the presentation object is stored in a cache of the computer system.

22. The apparatus of claim 13 wherein the domain entity is a mechanical domain entity.

23. The apparatus of claim 13 wherein the domain entity is an architecture, engineering and construction (AEC) domain entity.

24. The apparatus of claim 13 wherein the domain entity is a geographic information system (GIS) domain entity.

25. An article of manufacture comprising a program storage medium readable by a computer and embodying one or more instructions executable by the computer to perform a method for stylizing data in an object-oriented computer system, the method comprising:

obtaining a domain object comprising an object representation of data stored in a database for a domain entity;

obtaining an application object comprising an object representation of the data in the domain object that is relevant for a particular computer application; and

obtaining a presentation object comprising an object representation that encapsulates a visual appearance of the data in the application object.

26. The article of manufacture of claim 25 wherein the domain object contains all information about the domain entity that the domain object represents.

27. The article of manufacture of claim 25 wherein a stylization agent object obtains the application object for the domain object, wherein the stylization context identifies contains only that data relevant for the particular computer application.

28. The article of manufacture of claim 25 wherein the application

object further comprises business logic that provides functionality for the particular application.

29. The article of manufacture of claim 25 wherein a stylization agent object obtains the presentation object for the application object based on a stylization context, wherein the stylization context identifies a visual appearance for the data in the application object.

30. The article of manufacture of claim 29, the method further comprising obtaining a stylizer object, wherein the stylizer object comprises:

a domain object selected from a group comprising the domain object and application object;

a stylization context object, wherein the stylization context object comprises a stylization context;

a stylization agent;

a mapping of the stylization agent to a paired index of data objects and stylization context objects; and

a stylize method that invokes an appropriate stylization agent based on the mapping.

31. The article of manufacture of claim 30 wherein the paired index is a two-dimensional array of stylization agents indexed by a data object class and stylization context.

32. The article of manufacture of claim 25, the method further comprising caching the application object.

33. The article of manufacture of claim 25, the method further comprising caching the presentation object.

34. The article of manufacture of claim 25 wherein the domain entity is a mechanical domain entity.

35. The article of manufacture of claim 25 wherein the domain entity is an architecture, engineering and construction (AEC) domain entity.

36. The article of manufacture of claim 25 wherein the domain entity is a geographic information system (GIS) domain entity.